

# Claims

- [c1] 1.A method for applying data from a first hierarchical data structure to a second hierarchical data structure, comprising:
- receiving at least one source element from the first hierarchical data structure and at least one target element from the second hierarchical data structure;
  - determining whether source elements and target elements have child elements;
  - copying data from a source element to a target element;
  - separating data from a source element and applying the data to at least one child of a target element;
  - comparing a child of a source element to a child of a target element and determining a match; and
  - copying data from a source child element to a target child element
- where a match is determined.

- [c2] 2.The method of claim 1, further comprising receiving a definition and configuration of a datatype from a user.
- [c3] 3.The method of claim 1, further comprising receiving a definition and configuration of a source and target datatype mapping from a user.
- [c4] 4.The method of claim 1, further comprising receiving a definition and configuration of a match strategy from a user.
- [c5] 5.A computer program embodied on a computer-readable medium incorporating the method of claim 1.
- [c6] 6.A system for applying data from a first hierarchical data structure to a second hierarchical data structure, comprising:
  - a means for receiving at least one source element from the first hierarchical data structure and at least one target element from the second hierarchical data structure;
  - a means for determining whether source elements and target elements have child elements;
  - a means for copying data from a source element to a target element;

a means for separating data from a source element and applying the data to at least one child of a target element;  
a means for comparing a child of a source element to a child of a target element and determining a match; and  
a means for copying data from a source child element to a target child element, where a match is determined.

[c7] 7.A computer-readable medium containing a data structure for sharing data between hierarchical databases, comprising:

a source hierarchical data structure comprising source datatypes;  
a source lineage for linking related source datatypes into families;  
a target hierarchical data structure comprising target datatypes;  
a target lineage for linking related target datatypes into families;  
measures of similarity and similarity match tolerances;  
match strategies;  
results of a similarity transformation and an effectiveness indicia of match strategies.

- [c8] 8.The computer-readable medium of claim 7, further comprising mappings between source datatype elements and target datatype elements.
- [c9] 9.The computer-readable medium of claim 7, wherein the source and target datatypes each comprise a datatype name, a parent datatype reference, and an element.
- [c10] 10.The computer-readable medium of claim 7, wherein the source and target hierarchical data structures each comprise a parent datatype reference and an element of a datatype having a datatype reference, an element reference, and an alias name.
- [c11] 11.The computer-readable medium of claim 10, wherein the element comprises an element name, a datatype reference, a positional reference, an element reference, and an alias name.
- [c12] 12.The computer-readable medium of claim 7, wherein the measures of similarity and similarity match tolerances comprise a comparison algorithm that identifies an algorithm name, an implementation, and implementation parameters.
- [c13] 13.The computer-readable medium of claim 7, wherein

the match strategies comprise a comparison by context, comparison by element, comparison by data type, and comparison by attribute for each of the strategies, and an ordering of strategies according to accuracy.

- [c14] 14. The computer-readable medium of claim 8, wherein the mappings comprise mappings associated with source and target datatypes, mapping specifications, source data schema, target data schema, source data, and target data.